REMARKS

Claims 1-22 are pending in the application, claims 1, 11, 12 and 22 are withdrawn from consideration, claims 1, 5, 6, 10, and 15-21 have been amended, and new claims 23-30 have been added. Support for the claim amendments and additions may be found throughout the specification, including the claims as originally filed. In particular, support for the amendments to claims 2, 6, 10, and 18 can be found, for example, at page 59, lines 15-37. Support for new claims 23-30 can be found, for example, at page 45, lines 28-26 and page 52, lines 18-30. No new matter has been added.

Amendment of claims should in no way be construed as an acquiescence to any of the Examiner's rejections. The amendments to the claims are being made solely to expedite prosecution of the present application and do not, and are not intended to, narrow the claims in any way. Applicants reserve the option to further prosecute the same or similar claims in the instant or in a subsequent patent application.

Specification

As requested by the Examiner, Applicants have provided an abstract for the specification. Additionally, Applicants note that they will correct the blanks in the specification regarding the ATCC deposit before payment of the issue fee for this application as required by 37 CFR §1.804.

Rejection of claims 2-10 and 15-22 under 35 U.S.C 112, second paragraph

Claims 2-10 and 15-22 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

In particular, claims 2, 6, 10, and 15-22 were rejected for recitation of the term "gene product" because it was stated that "Applicant has elected the gene product to be a protein, however, one of skill in the art could interpret gene product to mean either nucleic acid molecule or protein." Claims 2, 6, 10 and 15-21 have been amended and claim 22 has been withdrawn from consideration. These claim amendments are believed to obviate the rejection. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claims 15, 17, and 20 were rejected for recitation of "TAp63α, TAp63β, TAp63γ, ΔNp63α, ΔNp63β and ΔNp63γ" because it was alleged that such labels have no meaning to one of skill in the art. As suggested by the Examiner, Applicants have inserted the corresponding SEQ ID NOs for each protein sequence. These claim amendments are believed to obviate the rejection. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claims 2-10 were rejected for recitation of the term "determining" because it was alleged that "it is unclear how this determination is being made." Furthermore, the Action states that "it is unclear as to how the determination is made between steps (b) and (c), is this determination made by examination or by another type of "determination" method." Claims 2, 6 and 10 have been amended. These claim amendments are believed to obviate the rejection. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claims 5, 16 and 19 were rejected for recitation of the term "RT-PCR" because it was alleged that "it is unclear how this technique is used to detect or determine the protein levels of p63." Claims 5, 16 and 19 have been amended. These claim amendments are believed to obviate the rejection. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Rejection of claims 2-10 and 13-22 under 35 U.S.C 112, first paragraph

Claims 2-10 and 13-22 were rejected under 35 U.S.C. 112, first paragraph, for reasons of enablement. The Action states that:

> "[T]he specification, while being enabling for a method of detecting malignant carcinoma comprising determining the level of p63 protein by an anti-p63 antibody and compared to p63 concentrations of healthy cell or non-malignant cells, does not reasonably provide enablement for a method of detecting malignant carcinoma comprising determining the level of p63 gene product in general." (Office Action at 4)

The rejection is respectfully traversed.

The claims as currently amended are believed to obviate the rejection. However, Applicants wish to note that the specification clearly provides enablement for methods for detecting malignant carcinoma comprising determining the level of a p63 gene product in a patient sample as compared to a control wherein the method involves detection of either a p63

nucleic acid or a p63 polypeptide. Contrary to the assertions at page 6 of the Office Action, the specification clearly provides sufficient teachings to enable one of skill in the art to determine a cancerous condition from the measurement of p63 nucleic acid molecules. In particular, the Examiner's attention is drawn to, for example, Example XIX at pages 117-123 and Figures 23-24 which disclose levels of p63 mRNA in control versus cancerous cell samples as determined using RT-PCR.

Accordingly, the subject matter of claims 2-10 and 13-22 was clearly described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. Therefore, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. 112, first paragraph, is respectfully requested.

Rejection of claims 2-7, 9 and 13 under 35 U.S.C. 102(b)

Claims 2-7, 9 and 13 were rejected under 35 U.S.C. §102(b) as being anticipated by Pujol et al., Proc. Amer. Assn. Of Cancer Res. Ann. Meeting 35: 165 (1994). The Action states that:

> Claims are drawn to a method of detecting malignant carcinoma comprising the determination of p63 gene product (protein), wherein the malignant carcinoma is from the breast, wherein the control sample is epithelial cells, and wherein the method of determination is by immunoblotting. Claims are further drawn to an antibody against p63. Pujol *et al* teach a method of determining malignant carcinoma from breast when compared to control samples found in epithelium. (Office Action at 6-7)

The rejection is respectfully traversed.

The cited Pujol et al. abstract refers to a paper describing the cloning of what is referred to as a "p63 gene". A copy of this reference, Schweizer et al., J. Cell Science 104: 685-694 (1993), is attached as **Exhibit A**. This paper discloses the identification and cloning of a 63 kDa membrane protein from a human placental library. The nucleotide and amino acid sequences of this protein are shown in Figure 2 at page 689 of the Schweizer et al. reference. As stated at page 693, the sequence for the p63 protein of Schweizer may be found under EMBL acession number X69910. A copy of this sequence is attached as **Exhibit B**. Applicants have aligned the p63 protein described in Schweizer et al. ("Pujol" sequence) with SEQ ID NOs: 13-24 of the present application using the ClustalW program (http://www.ebi.ac.uk/clustalw/). This alignment is attached as **Exhibit C**. The pairwise alignments of the Pujol et al. sequence (Accession No. X69910) with SEQ ID NOs: 13-24 produced alignment scores ranging from **5-8% homology**. A summary of the pairwise alignment scores obtained from ClustalW is attached

hereto as **Exhibit D**. Accordingly, the "p63 protein" described in Pujol et al., and further described in Schweizer et al., is unrelated to the sequences of the instant application. In view thereof, reconsideration and withdrawal of the rejection of claims under 35 U.S.C. 102(b) is respectfully requested.

Rejection of claims 2-7, 9, 13, 16 and 18-19 under 35 U.S.C. 103(a)

Claims 2-7, 9, 13, 16 and 18-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pujol et al. The Action states that "[i]t would have been *prima facie* obvious to one of ordinary skill in the art to determine the p63 levels in patient tissue samples to determine the existence or presence of a malignant condition because Pujol *et al* taught the utilization of p63 as a marker for a malignant condition in epithelial derived cells." As stated above, the "p63" protein disclosed in Pujol et al. is unrelated to the sequences of the instant application. Accordingly, the methods as presently claimed in the instant application would not have been obvious over the teachings of Pujol et al. In view thereof, reconsideration and withdrawal of the rejection of claims under 35 U.S.C. 103(a) is respectfully requested.

CONCLUSION

Applicants consider the Response herein to be fully responsive to the referenced Office Action. Based on the above Remarks, it is respectfully submitted that this application is in condition for allowance. Accordingly, allowance is requested. If a telephone conversation with Applicant's Agent would expedite prosecution of the above-identified application, the Examiner is urged to call the undersigned at (617) 832-1000.

Respectfully submitted,

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